

Applicant: James A. Proctor, Jr.
Application No.: 09/772,176

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for adapting to changes affecting a wireless signal comprising:

detecting a movement of a communication device communicating the wireless signal or a movement of an external object in a signal path based on a measurement of a metric of a modulated signal attribute comprised of at least one of amplitude of the wireless signal as a whole, frequency of the wireless signal, [[and]] or phase of the wireless signal as a whole, the phase being determined relative to a reference signal separate from the wireless signal;

selecting a parameter adjustment, based on the detected movement, of at least one of: an antenna mode, a power level, a forward error correction (FEC) coding rate, a number of modulation symbols, and a data transfer rate; and performing the parameter adjustment.

2. (Currently amended) The method as in [[Claim]] claim 1, wherein the detecting is performed by a mobile station.

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3. and 4. (Canceled).

5. (Currently amended) The method as in [[Claim]] claim 1, wherein the detecting is based on a signal in an automatic gain control (AGC) loop.

6. (Currently amended) The method as in [[Claim]] claim 5, wherein the detecting is a function of a statistic of the signal in the AGC loop.

7. (Currently amended) The method as in [[Claim]] claim 6, wherein the statistic that is used is variance.

8. (Currently amended) The method as in [[Claim]] claim 1, wherein the detecting is based on a phase error signal produced by at least one of a delay lock loop, matched filter, or correlator.

9. (Currently amended) The method as in [[Claim]] claim 8, wherein the detecting is a function of a statistic of the phase error signal.

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10. (Currently amended) The method as in [[Claim]] claim 9, wherein the statistic that is used is variance.

11. ((Currently amended) The method as in [[Claim]] claim 1, wherein the metric is based on a frequency error signal in a frequency control loop.

12. (Currently amended) The method as in [[Claim]] claim 11, wherein the detecting is a function of a statistic of the frequency error signal.

13. (Currently amended) The method as in [[Claim]] claim 12, wherein the statistic that is used is variance.

14. (Currently amended) The method as in [[Claim]] claim 1, wherein the detecting includes:

comparing the metric to a threshold level.

15. (Canceled).

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16. (Currently amended) The method as in [[Claim]] claim 1, wherein the selecting the parameter adjustment includes selecting the antenna mode comprises changing from directive to omni-directional.

17. (Currently amended) The method as in [[Claim]] claim 1, wherein the selecting the parameter adjustment includes selecting the antenna mode comprises changing from omni-directional to directive.

18. (Canceled).

19. (Currently amended) The method as in [[Claim]] claim 1, wherein the selecting the parameter adjustment includes selecting to reduce at least one of the FEC coding rate, or the number of modulation symbols, to a minimum level while maintaining the signal path.

20. (Canceled).

21. (Currently amended) An apparatus for adapting to changes affecting a wireless signal, comprising:

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a processing unit configured to detect a movement of a communication device communicating the wireless signal or a movement of an external object in a signal path based on a measurement of a metric of a modulated signal attribute comprised of at least one of amplitude of the wireless signal as a whole, frequency of the wireless signal, or phase of the wireless signal as a whole, the phase being determined relative to a reference signal separate from the wireless signal; and

a compensator configured to make a signaling parameter adjustment, responsive to the movement detected by the processing unit, of at least one of an antenna mode, a forward error correction (FEC) coding rate, a number of modulation symbols, and a data transfer rate.

22. (Currently amended) The apparatus as in [[Claim]] claim 21, configured as a mobile station.

23. and 24. (Canceled).

25. (Previously presented) The apparatus as in [[Claim]] claim 21, wherein the processing unit is configured to detect motion based on a signal in an automatic gain control (AGC) loop.

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26. (Currently amended) The apparatus as in [[Claim]] claim 25, wherein the processing unit is configured to detect motion as a function of a statistic of the signal in the AGC loop.

27. (Currently amended) The apparatus as in [[Claim]] claim 26, wherein the processing unit is configured to use variance as the statistic.

28. (Currently amended) The apparatus as in [[Claim]] claim 21, wherein the processing unit is configured to detect motion based on a phase error signal produced by at least one of a delay lock loop, a matched filter, or a correlator.

29. (Currently amended) The apparatus as in [[Claim]] claim 28, wherein the processing unit is configured to detect motion as a function of a statistic of the phase error signal.

30. (Currently amended) The apparatus as in [[Claim]] claim 29, wherein the processing unit is configured to use variance as the statistic.

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31. (Currently amended) The apparatus as in [[Claim]] claim 21, wherein the processing unit is configured to detect motion based on a frequency error signal in a frequency control loop.

32. (Currently amended) The apparatus as in [[Claim]] claim 31, wherein the processing unit is configured to detect motion as a function of a statistic of the frequency error signal.

33. (Currently amended) The apparatus as in [[Claim]] claim 32, wherein the processing unit is configured to use variance as the statistic.

34. (Currently amended) The apparatus as in [[Claim]] claim 21, wherein the processing unit is configured to detect motion using a comparison threshold level.

35. (Currently amended) The apparatus as in [[Claim]] claim 21, further comprising:

an antenna having a changeable antenna mode, wherein the compensator is configured to change the antenna mode.

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36. (Currently amended) The apparatus as in [[Claim]] claim 35, wherein the compensator is configured to change the antenna mode between directive and omni-directional modes.

37. and 38. (Canceled).

39. (Currently amended) The apparatus as in [[Claim]] claim 21, wherein the compensator is configured to reduce at least one of the FEC coding rate, or the number of modulation symbols, to a minimum level while maintaining the signal path.

40. and 41. (Canceled).

42. (Currently amended) A computer-readable storage medium containing a set of instructions for a general purpose computer, the set of instructions comprising:

 a signal adaptation code segment configured to cause a processor to control a signaling path to adapt to changes affecting the signaling path,

 a detection code segment configured to detect a movement of a communication device communicating the wireless signal or an external object in a

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signal path based on a measurement of a metric of a modulated signal attribute comprised of at least one of amplitude of the wireless signal as a whole, frequency of the wireless signal, [[and]] or phase of the wireless signal as a whole, the phase being determined relative to a reference signal separate from the wireless signal; and

an adjusting code segment configured to make a signaling parameter adjustment, responsive the movement detected by the detecting code segment, of at least one of an antenna mode, a forward error correction (FEC) coding rate, a number of modulation symbols, and a data transfer rate.